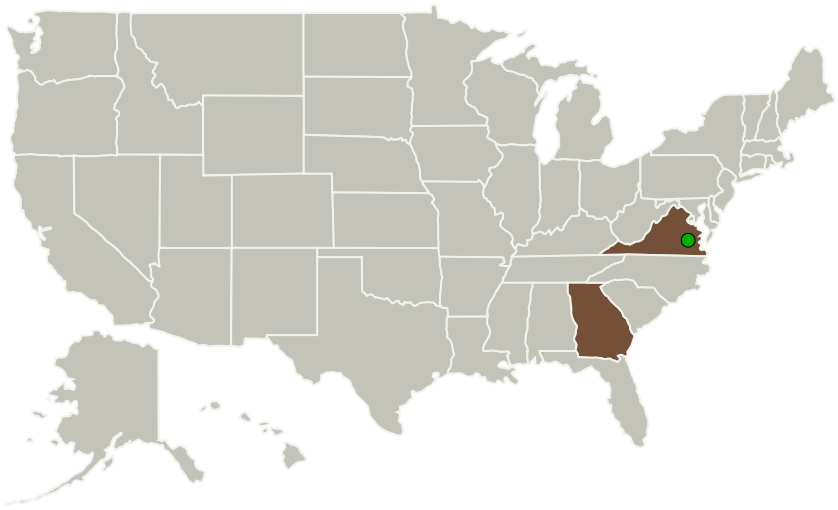
Frequency Steered Acoustic Transducer, Phase II

Completed Technology Project (2011 - 2014)

Project Introduction

This Small Business Innovation Research Phase II project is to fabricate, characterize, and verify performance of a new type of frequency steered acoustic transducer (FSAT) for structural health monitoring for impacts and leaks in aerospace structures. FSATs will be demonstrated both in the laboratory and on relevant NASA structure. Testing would be performed on both simple and complex parts. Multiple receivers would be tested to develop incoming signal analysis, angular distribution mapping, and source detection and localization. In addition, Genziko will evaluate the suitability of its integration into a wireless system, using a micro power generator and RF transceiver.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
Genziko, Inc.	Lead Organization	Industry	Alpharetta, Georgia
Langley Research Center(LaRC)	Supporting Organization	NASA Center	Hampton, Virginia

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Primary U.S. Work Locations	
Georgia	Virginia

Project Transitions

June 2011: Project Start

March 2014: Closed out

Closeout Documentation:

- Final Summary Chart*(https://techport.nasa.gov/file/138881)*

Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Organization:

Genziko, Inc.

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Principal Investigator:

Craig D Near

Co-Investigator:

Craig Near

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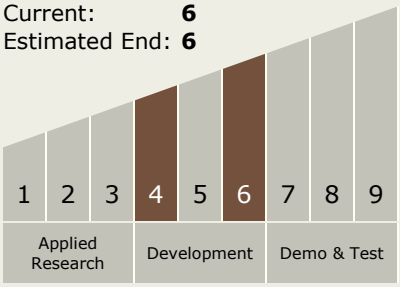
Technology Maturity (TRL)

Start: **4**
Current: **6**
Estimated End: **6**



Technology Areas

Primary:

- TX08 Sensors and Instruments
  - TX08.1 Remote Sensing Instruments/Sensors
    - TX08.1.5 Lasers

Target Destinations

The Moon, Mars, Outside the Solar System, The Sun, Earth, Others Inside the Solar System